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Flow polytopes in combinatorics and algebra

The flow polytope $\mathcal{F}_G(\mathbf{v})$ is associated to a graph G on the vertex set $\{1, \dots, n\}$ with edges directed from smaller to larger vertices and a netflow vector $\mathbf{v} = (v_1, \dots, v_n) \in \mathbb{Z}^n$. Postnikov and Stanley established a remarkable connection of flow polytopes and Kostant partition functions two decades ago, developed further by Baldoni and Vergne. Since then, flow polytopes have been discovered in the context of Schubert and Grothendieck polynomials and the space of diagonal harmonics, among others. This talk will survey a selection of results about the ubiquitous flow polytopes.